REMARKS

I. INTRODUCTION

In response to the Office Action dated September 27, 2004, the claims have not been amended. Claims 1-30 remain in the application. Re-consideration of the application is requested.

II. NON ART REJECTIONS

On page (3) of the Office Action, independent claims 1, 10-11, 20-21, and 30 were rejected under 35 U.S.C. § 112, first paragraph for lack of enablement. Specifically, the rejection provides that the specification does not reasonably provide enablement for identifying luminance range independently from identifying the color vector. The Office Action states that in figs. 6-8 and supporting specification page 10-13, the color vector and luminance range are in the one coordination system and luminance range can determine the color correction of the color vector. The Office Action continues and states that there is only a dependent relationship in fig. 6 and no independence of each other.

Applicants respectfully disagree with and traverse the rejections. Applicants refer the Examiner to FIGS. 6, 7, and 8. More specifically, FIG. 8 provides:

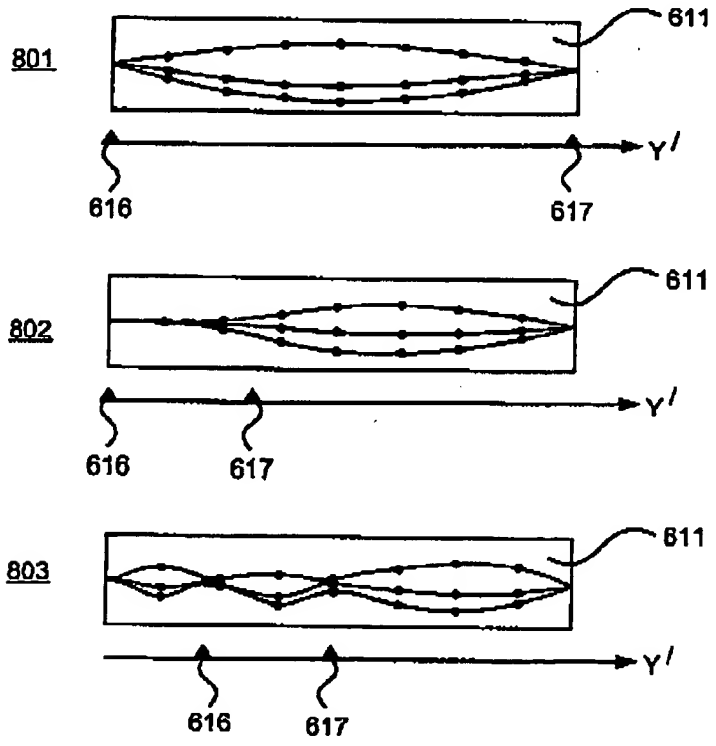

Fig. 8

G&C 30566.136-US-01

The text on page 9, lines 11-18 describes the color vector in FIGS. 6-8:

> The color vector graph 611 has three components, one each for red 612, green 613 and blue 614. These components can be made to vary in their proportions as a function of luminance 615. For any given luminance Y', the red, green and blue values add up to give a total of one. At either end of the graph 611, the color vector is zero, and the three curves converge to a common value of one third. The vertical axis of the graph is scaled in such a way that one third appears as half the maximum color displacement.

The text on page 10, line 27-page 11, line 11 describes FIG. 8 and the manipulation of the color vectors and luminance range:

> Examples of the types of color vector functions that can be achieved are shown in their graph form 611 in FIG. 8. With the range markers 616, 617 set to luminance values of zero and one respectively, color vectors defined by user manipulation of the trackball 618 cause a general change to the red, green and blue color curves, as shown at 801. With the maximum marker 617 moved to a luminance of one quarter, changes can then be made to the curves over a selected small range of luminance, with no changes to the curves outside this range, as shown at 802. After multiple iterations of range selection and color vector addition, complex curves can be created, as shown at 803. The level of complexity shown at 803, however, can be built up extremely quickly due to the nature of the interface provided.

As can be seen in this text, the range markers 616 and 617 may be moved and set the luminance range. Further, the color vectors/curves (e.g., each curve in graph 611) are manipulated using a trackball to manipulate the red, green, and blue vectors. Thus, the user identifies the luminance range (i.e., by moving the range markers 616 and 617) independently from identifying the color vector (i.e., by using the trackball to manipulate the curves). In this regard, the user identifies the luminance range using the markers and the color vector by manipulating the curve. Each such acts are performed independently from each other. Thus, there is clear support in the specification for the independent identification set forth in the claims.

In view of the above, Applicants respectfully request withdrawal of the rejection under 35 USC §112.

III. PRIOR ART REJECTIONS

On page (4) of the Office Action, claims 1-8, 10-18, 20-28, and 30 were rejected under 35 U.S.C. §102(e) as being anticipated by Takashima et al., U.S. Patent No. 6,504,551 (Takashima). However, on page (6) of the Office Action, claims 9, 19, and 29 were indicated as being allowable if rewritten in independent form to include the base claim and any intervening claims.

Applicants acknowledge the indication of allowable claims, but respectfully traverses these rejections.

Specifically, the independent claims were rejected as follows:

As to claim 1 (as best understanding of the Examiner), Takashima discloses Apparatus for processing image data comprising:

storage means for storing instructions (fig. 1 12);

memory means for storing the instructions during execution and for storing image data (fig. 1 13);

processing means (fig. 1, 11) and display means (fig. 1, 14) for allow user to interact and modify the color values, wherein,

identifying, through input from a user, a color vector (Pi) and luminance range (BL and WL) for said color vector (fig. 3a, col. 16 lines 31-52), wherein said luminance range is identified by the user independently from the identifying of the color vector (col. 16 line 66-col. 17 line 25);

defining a color vector function (equation 1) in response to said identifying (col. 17, lines 5-32);

modifying colors in response to the luminance values with reference to the color vector function (fig. 2-fig. 3B, col. 16 line 66-col. 17 line 35).

As to claims 10, 11-18, 20, 21-28 an 30, the limitations are addressed with regard to claim 1-9, (note that updating the color vector function is inherent when user either choosing other Ps or inputting luminance ranges).

Applicants traverse the above rejections. Specifically, Takashima does not teach, disclose or suggest a user identifying a luminance range independently from identifying a color vector.

Independent claims 1, 10, 11, 20, 21, and 30 are generally directed to easily warping the color of image data. Specifically, the claims each provide for input received from a user. The input is used to identify a colour vector and a luminance range for the colour vector. The claims provide that the identification of the luminance range is performed independently of the identification of the colour vector. In this regard, two separate identifications are performed through user input. A color vector function is then defined (in response to the identifying) followed by the modification of colours in response to the luminance values with reference to the colour vector.

The cited reference does not teach or suggest these various elements of Applicants' independent claims.

Takashima merely describes the color of plural pixels making up a source video image corrected by a computer 10, a hard disc device 20 and a picture processing device 30. The computer 10 functions as a parameter setting unit for setting plural parameters for designating the source color and the destination color and a computing unit for computing correction data for color correction from the source color to the destination color using the plural parameters set by the parameter setting unit. The hard disc device 20 stores the source video image and effects color correction in the picture processing device 30 for correcting the color of a pixel corresponding to the source color contained in the source video image to the destination color. (See Abstract).

However, Takashima lacks any discussion about independently identifying a luminance value and a colour vector. Instead, Takashima teaches away from Applicants' invention because it describes the modification of a characteristic curve of a color signal which includes the modification of the black level and white level (see col. 16, lines 31-52).

In rejecting the claimed element of identifying the colour vector and luminance range, the Office Action relied on FIG. 3A and the text in column 16, lines 31-52. FIG. 3A provides:

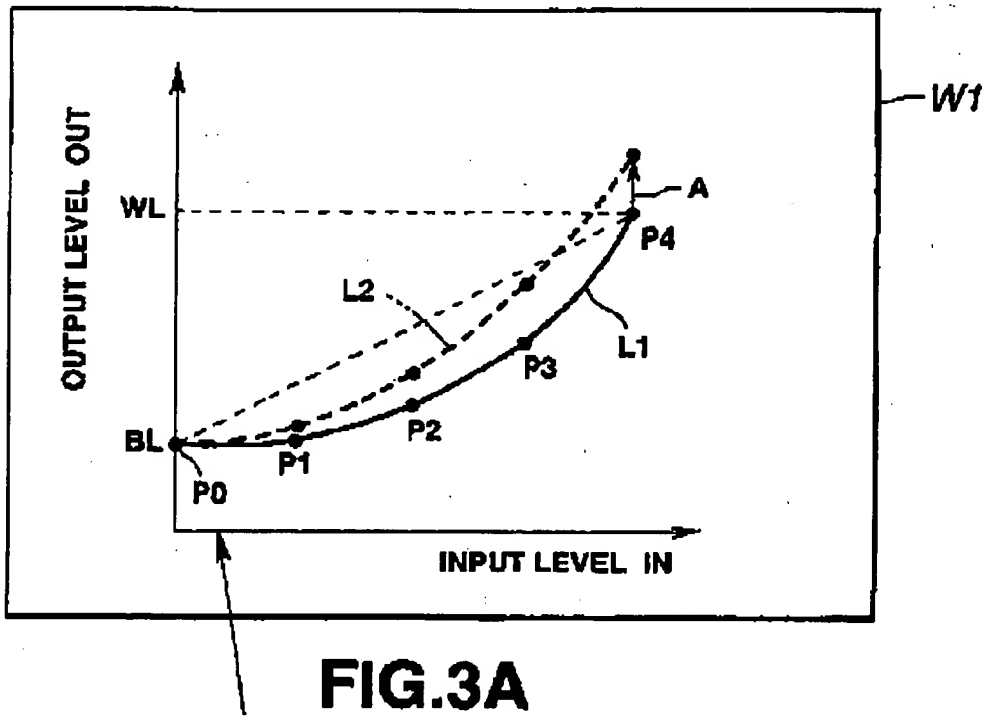

FIG.3A

The cited text describes FIG. 3A and provides that the beginning point P0 and the terminal point P4 denote the black level BL and white level WL, with the curvature of the curve denoting gamma. Accordingly, the luminance black and white levels are identified on the curve itself as the end points. The text describes how the operator can modify the curve by grabbing individual points including the beginning point P0 and terminal point P4. In this regard, Applicants note that instead of identifying the luminance range independently from the colour vector, Takashima identifies the white level and black level simultaneous with and as part of the identification of the characteristic colour curve. Accordingly, unlike the present claims which provide for an independent

identification of the luminance range (e.g., by moving range markers 616 and 617) and the colour vectors 612-614, Takashima provides for a single motion that affects both the characteristic color curve and the luminance values. Not only does such a description fail to teach, describe, or suggest, implicitly or explicitly, the present invention, but it teaches away from practicing the present invention as claimed.

> In response to the above arguments, the Office Action now relies on col. 16, line 66-col. 17, line 25 and states:
>
> Examiner disagrees. In fact, Takashima expressly mentions that image correction (modifying) means for determining the characteristic curve (color vector) through inputting black level and while level (luminance range) by a user (col. 16 line 66-col. 17 line 25).

However, the cited text still fails to teach the user, through input means, identifying the luminance range independently from identifying the colour vector. Instead, the text states that the user can input numerical values for the black level, white level and gamma to modify the display of the characteristic curve (see col. 17, line 1-4). The cited text continues and explicitly states that the output signal level is then calculated by the CPU based on the black level that is input and a window is then formed to display the curve L1 (see col. 17, lines 5-8 and 20-22). The cited text reinforces Applicants arguments in that the black and white levels are not identified independently (by the user) from the color vector but as part of the color vector. In other words, instead of the claimed independent identification, Takashima requires an integrated identification where the black and white luminance values are identified as part of and with the curve itself. In this regard, there is no independent identification by the user but the color vector curve is modified by the user with the black and white levels. While the present claims provide the ability to independently identify a luminance range (e.g., using the range markers) from the color vector (e.g., using the track ball to modify the color vector itself), Takashima has a display as illustrated in FIG. 3A that clearly does not allow the user to adjust the black and white levels independently from the color vector.

While Applicants agree that Takashima's curve can be determined through inputting black and white levels (e.g., using numerical entries), such an identification is not independent from identifying the color vector. Instead, such input is part of identifying the color vector and Takashima provides no mechanism for independently identifying the black and white levels from the curve itself. As can be seen in the text describing FIG. 3A, when the user tries to change the black and white levels (by adjusting points P0 and P4), the curve is modified with it (see col. 16, lines 53-65). In this regard, there is no capability to independently establish or identify the black and white levels separate from the curve itself. Instead, the black and white levels are integrated with and part

of Takashima's curve. The ability to specify numerical values for the endpoints does not alter the fact that Takashima's black and white levels are still identified as part of the curve. Again, there is no capability to identify the black and white level separately and independently from the curve itself. Accordingly, Takashima's teaching does not and cannot teach, describe or suggest, the present invention, implicitly or explicitly.

In addition, Applicants submit that the various elements of Applicants' claimed invention together provide operational advantages over the systems disclosed in Takashima. Further, Applicants' invention solves problems not recognized by Takashima.

Thus, Applicants submit that independent claims 1, 10, 11, 20, 21, and 30 are allowable over Takashima. Further, dependent claims 2-9, 12-19, and 22-29 are submitted to be allowable over Takashima in the same manner, because they are dependent on independent claims 1, 10, 11, 20, 21, and 30, respectively, and because they contain all the limitations of the independent claims. In addition, dependent claims 2-9, 12-19, and 22-29 recite additional novel elements not shown by Takashima.

IV. CONCLUSION

In view of the above, it is submitted that this application is now in good order for allowance and such allowance is respectfully solicited. Should the Examiner believe minor matters still remain that can be resolved in a telephone interview, the Examiner is urged to call Applicants' undersigned attorney.

Respectfully submitted,

Daniel Pettigrew et al.

By their attorneys,

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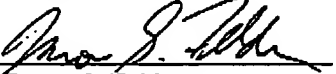
By: 
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